

Annual Goals for Teacher Shortage Areas: Mathematics - Traditional Route

Institution	Teacher Shortage Area	Academic Year	Goal	Goal Met?	Description of strategies used to achieve goal	Description of steps to improve performance in meeting goal or lesson learned in meeting goal
Alliant International University	Mathematics	2010-11	40 (total Trad. & Alt.)	No	Partnerships with organizations who recruit STEM (Science, Technology, Engineering and Math) professionals opened a pipeline of prospective students, and the program initiated support systems to help career-changers succeed in a new profession. The organization also increased online marketing efforts for prospective students generally, which may have contributed to meeting the goals for this specific subject.	
Argosy University	Mathematics	2010-11	10	No	Argosy University is developing relationships with local districts as a marketing strategy in order to generate interest in the teacher preparation program. This has resulted in 6 single subject candidates in Math.	Reaching out to districts has provided interest in our other Master level programs but not provided us with sufficient contacts to increase this candidate population.
Azusa Pacific University	Mathematics	2010-11	20% increase	Yes	Fifty percent part-time recruiters have been employed. They are able to inform prospective candidates about the job opportunities in the shortage areas and have established regular contact points with undergrad cohorts i.e. week 46 Information Meeting with Human Development cohorts. They meet regularly with department leadership to discuss alternative routes and opportunities to recruit students into the programs. The format of information meetings has been changed to include an enrollment counselor from Graduate Admissions. The enrollment counselor can answer all admission questions. Recruiters, advisers, credential analysts, and enrollment counselors encourage candidates to consider Foundational Mathematics and other shortage areas as their subject area.	Teaching jobs in California are currently scarce. Potential candidates are being informed that their best job opportunities will be in the shortage areas. They are also investigating and connecting students with job opportunities to teach abroad.
Biola University	Mathematics	2010-11	3	Yes	<ol style="list-style-type: none"> 1. Promoted adding an authorization in Mathematics to candidates earning other credentials. 2. Met with the Dean of Math and Science to create the Math Secondary Instruction major. 3. Conducted Information Sessions to incoming Freshman about earning a Math Teaching Credential. Sessions included information on APLE and Teach Grant highlighting teacher shortage areas. 4. Conducted Information Sessions to prospective graduate students about the Teacher Preparation Program and the need for Math teachers. 	We learned that we need increased interdisciplinary collaboration and communication with the Math Department to continue promoting earning a Math teaching credential.

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Brandman University	Mathematics	2010-11	60	Yes	Last year we met our goal in this area and had 31 candidates enrolled in our foundational math credential program and 10 students in our advanced math program.	We intend to increase enrollment in these programs by continuing our outreach efforts with potential teaching candidates and increasing articulation agreements with local community colleges. In addition, we will also focus on recruiting candidates who completed Brandman's multiple subject credential or completed a multiple subject program at another university who may have an interest in obtaining a single subject credential in math.
California Baptist University	Mathematics	2010-11	Increase enrollment by 5%	No	Host monthly information sessions Visit education prerequisite courses Network with professors in the math department	Devise strategies to personally interact with math students.
California Lutheran University	Mathematics	2010-11	Recruit add'l students	Yes	In 2009-10 there were 6 Single Subject Math completing candidates, in 2010-11 there were 5. However, including all candidates enrolled in the program, there were a total of 7. We continue to develop working relationship with the Math Department, and support the professor assigned to mentor math majors who are interested in teaching. We are strengthening support for education faculty who are very visible in the math community providing advisement opportunities. The CLU Math Department has made education courses part of their major requirement, thus uniting the two departments.	1. Continued K-12 outreach to veteran math teachers for professional development 2. Math Circles for middle and high school math teachers four times a year
California Polytechnic State University, San Luis Obispo	Mathematics	2010-11	10 Candidates	Yes	Efforts to meet this enrollment goal include active recruitment of mathematics majors at Cal Poly and continued conversation with other STEM disciplines about the mathematics credential program. The merger of the School of Education and College of Science and Mathematics has provided new opportunity for collaborative planning for instruction and external funding opportunities. Include teacher scholarship program such as the Noyce scholarship program in Mathematics and science to attract highly qualified science and mathematics students to the teaching profession.	Mathematics candidates are provided with hands-on experiences through programs run by the Center for Excellence in Science & Mathematics Education (CESaME) such as the Learn by Doing lab, Teaching Assistants in Math & Science (TeAMS) and Science Teacher and Researcher Program (STAR). This exposure creates opportunities for candidates to explore future careers in teaching math.

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California State Polytechnic University, Pomona	Mathematics	2010-11	See description below	Yes	Cal Poly Pomona recruits undergraduate students into the STEM areas and supports their success through the Robert Noyce Scholars Program. Additional initiatives include supporting teacher candidates in preparation for the subject matter exam (CSET), preparing existing teachers to obtain subject matter competence through district-based content course, and supporting teacher candidates while in Clinical Practice to be able to afford to discontinue working in an unrelated job for support. The MSTI (Math Science Teaching Initiative) Program funded through the state legislature and the CSU system support the MSTI initiatives.	The Robert Noyce Scholarship Program for Math and Science Teachers seeks to encourage talented Science, Technology, Engineering, and Mathematics (STEM) majors and professionals who might otherwise not have considered the teaching profession, particularly those from under-represented groups. Cal Poly Pomona provides support to the scholars throughout the period covered by the scholarships and up to four years after to assist the scholars to reach their goal of a credential and a teaching position. During 2010-11, we accepted an additional 17 Noyce Scholars; 19 others were alumni scholars. Through the College of the Extended University, Cal Poly Pomona Department of Education is offered MSTI (Math Science Teaching Initiative) a program to prepare teachers for authorization to teach mathematics through Algebra II. The program targets middle and elementary school teachers with a multiple subject credential and entails a series of four courses in mathematics designed to teach the content and pedagogy required
California State University, Bakersfield	Mathematics	2010-11	Increase enrollment	Yes	Concentrated efforts on recruitment in the undergraduate programs, such as Math and Liberal Studies. The Teacher Quality Program (TQP) grant conducts quarterly recruitment activities on campus and at area Community Colleges.	Increase the number of program information sessions to allow more opportunity for candidates to apply. Improvement process is ongoing.
California State University, Channel Islands	Mathematics	2010-11	Maintain from 9-9	No	Dissemination of print and web based information to current undergraduate students on campus, to local community colleges, and to the County Office of Education. Provided multiple scholarship opportunities for undergraduate (prerequisite) math and math credential students. Offered content preparation classes for state subject matter exams.	Continue to seek special funding to support recruitment, retention, and financial assistance for students seeking a mathematics credential. Locally, secondary-level teaching positions in mathematics are scarce. Overall credential numbers are low in all secondary education core disciplines.

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California State University, Chico	Mathematics	2010-11	Increase number	Yes	<ul style="list-style-type: none"> •Special recruitment incentive campaign for Project M.A.T.H. (Mathematics And Teaching on the Horizon), including an increase in the tutor support to retain math education majors who start the program (\$1000), and an increase in the amount of individual scholarships awarded •begin implementation of newly approved four-year blended mathematics education/teacher education program with newly developed courses leading to a bachelor's degree and secondary math credential; •Math mentoring program for at-risk students at local middle and high schools conducted by university students satisfying some of their early field experience requirements; •“MSTI Launch” events to create new interest in math and science teaching, featuring speakers, hands-on activities, and information about available scholarships and teaching; •Awarding of over \$265,500 to date (math and science)in Teacher Recruitment Project scholarships; •Awarding of Noyce Scholarships for outstanding math and science candidates 	The number of mathematics candidates experienced a slight uptick in 2010-11 following a slight downturn the previous year due in part to teacher layoffs in the state, as well as limitations placed on spring enrollments by the CSU system in response to budget cuts. We continued to continue to work on the above strategies in 2011-12.

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California State University, Dominguez Hills	Mathematics	2010-11	Increase enrollment	Yes	<p>Goal: Maintain or increase 2010-11 enrollment levels in Urban Teacher Residency (UTR) and Transition to Teaching (TTT) cohorts.</p> <p>Strategies used:</p> <ul style="list-style-type: none"> • recruitment of Math majors from CSUDH and other institutions • active engagement with Math student in the Education Option • active advisement of Liberal Studies majors with a Math Option leading to the Introductory Subject Matter Authorization; • recruitment from local districts, among teachers as well as high school students • information sessions • recruitment at job and graduate school fairs • website and print presence on campus and in local districts • obtaining campus and program data to inform our recruitment efforts 	<p>Preparing Math teachers has been a focus of the School of Education for some time. Face-to-face recruiting and intrusive advising continue to be our best strategies for filling cohorts. We have obtained funding through state and federal grants, including five Transition to Teaching (TTT) grants, the CSU Math/Science Initiative grant (MSTI), a NOYCE grant, and a federal TQE grant that funds the Urban Teacher Residency (UTR) program. All of these programs focus on preparing excellent high school math and science teachers. We have learned that we must approach this comprehensively, and in direct collaboration with our school partners. We recruit from several populations, including students on our own campus, from local high schools and even middle schools. Our 2011 TTT grant will fund development of an online state-wide preparation program for high school Math and Science</p>

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California State University, East Bay	Mathematics	2010-11	35	No	With funding support by the CSU System's Math and Science Initiative, the College of Education and Allied Studies was able to enhance its partnership with the College of Science for the purpose of expanding the recruitment and outreach of prospective mathematics and science teachers. The following strategies were used: enhance recruitment materials in print and on the Internet, conduct more hands-on events, and increase partnerships with local pipeline organizations. An on-campus pipeline program for undergraduates who may consider teaching in mathematics or science was created entitled, Future Math and Science Teachers Scholars Program or FMSTSP. Participants who completed the FMSTSP program are guaranteed admissions into the university's teaching credential program provided that they have satisfied all admissions requirements. FMSTSP participants receive advising on credentialing matters, two quarterly events on math or science-related topics, field trip opportunities, and financial aid.	A program coordinator was designated to facilitate the recruitment efforts for both on and off-campus activities. The coordinator works closely with the departments and credentials office to ensure accurate and timely notices of events and deadlines. The college participation in the GE Clusters started in fall 2011. Feedback will be solicited from participants and integrated into the Unit Assessment Plan, where applicable. See Comments below.
California State University, Fresno	Mathematics	2010-11	43 by 2010; 50 by 2013	No	Mathematics and Science Teacher Initiative (MSTI), a multi-year systemwide effort to recruit and train Math and Science teachers.	AY 2006 - 13 teachers; AY 2007 - 22 teachers; AY 2008 - 35 teachers; AY 2009 - 36 teachers; AY 2010 - 46 teachers; AY 2011 - 38 teachers The Mathematics and Science Teacher Initiative provides: <ul style="list-style-type: none"> • FCSET workshops on science and math content • Middle school math and science teaching methods courses • Advising for prospective middle and high school mathematics and science teachers • Reimbursement of CSET fees for mathematics and science subtests • Reimbursement of CTC fees for mathematics and science credential applications • Free membership in science and math professional organizations • STEM news and information via COMET (California Online Mathematics Education Times)

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California State University, Fullerton	Mathematics	2010-11	See below	Yes	<p>Goal: Our goal for 2010-11 was a 5% increase in mathematics credentials.</p> <p>Strategies for mathematics candidate recruitment and support include:</p> <ul style="list-style-type: none"> • scholarships • distribution of brochures throughout campus • articulation with undergraduate programs that are math-rich to promote mathematics teaching as a career option • websites for mathematics and foundational-level mathematics credential programs • web-based video about mathematics teaching • community college outreach presentations • outreach in Intro to Teaching courses about job opportunities for teachers of mathematics and science • mentoring and support for students from underrepresented populations in the mathematics major who plan to enter teaching • involvement of local teachers of mathematics in methods coursework to model effective practices • training in the use of technology tools such as Geogebra • funding to attend local mathematics education conferences (CMC-S 	<p>We have learned that it is critical to reach out to students both at community colleges as they are still deciding upon career pathways and at our own IHE in mathematics- and science-rich majors who are early in their program of study to generate interest in teaching. This is followed up with opportunities to get involved with local mathematics and science education activities and scholarship opportunities for juniors/seniors planning to enter the credential programs. We have also learned that web-based media provide a relatively inexpensive way to provide access to program information to a wide audience. Our websites, videos, and blog attract large numbers of visitors and cost little to maintain.</p>

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California State University, Long Beach	Mathematics	2010-11	40 traditional/38 foundational level	Yes	<p>We have maintained strong partnerships among the College of Education, the College of Natural Sciences and Mathematics, the College of Engineering, and Cerritos Community College. We recruited widely in these colleges, retained candidates (via on-going education, as well as monetary incentive stipends), and provided strong advising in the Single Subject Math Credential Program. We have improved program through improved classroom technology, new software, and course re-alignment.</p> <p>We have continued our Cerritos summer GATE academy. In this year we also continued to partner with the Long Beach Unified School District to deliver coursework to credential additional teachers in foundational level mathematics (as an add-on to existing credential) in response to a request from district superintendent Chris Steinhauser. 12 teachers completed this program and have been working on passing the required CA exams.</p>	<p>A concerted California State University effort involving all campuses and providing supportive resources has been critical to our success.</p> <p>Placing a priority on recruiting STEM candidates by our college dean is crucial and leads to resource allocation, primarily in making time available for key faculty to lead and participate in the recruiting and retention of candidates for STEM credentials. Faculty commitment to the effort is also important, including faculty at our partner community colleges who steer students toward STEM teaching careers. Collegial working relationships among teacher education, mathematics education, and science education faculty are also valuable. Partnerships among the campus, community colleges, and school districts (already in place in our case) have been vital to our efforts, and have been strengthened through our collaborative efforts to increase our numbers of STEM candidates Science.</p>
California State University, Los Angeles	Mathematics	2010-11	increase applications 10%	No	<p>We continue to allocate additional MSTI and Noyce resources to increase our applicant pool. We also work very closely with our feeder community colleges to assist in increasing our applicant pool. However, due to the extraordinary teacher lay-offs in California, we were unable to recruit more teacher education applicants in mathematics. We have developed and are implementing a program with Los Angeles Unified School District to prepare laid off elementary teachers to meet the requirements of an added authorization in mathematics.</p>	<p>We will increase the number of candidates in the mathematics teacher residency program.</p>
California State University, Monterey Bay	Mathematics	2009-10	# of Math Credentials	Yes	<p>Goal: Increase percentage of number of students who have been certified (credentialed) in Math by 5%.</p> <p>Goal met by increased recruitment efforts.</p>	

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California State University, Northridge	Mathematics	2010-11	129	Yes	In 2010/2011 131 mathematics teachers were recommended. The Math Science Technology Initiative (MSTI) a grant that supports workshops to help prepare future math and science teachers prepare to pass the California Standards Examination for Teachers exam. The College engages in active recruitment with workshops, emails, flyers, and incentives. In addition, the College of Education collaborates with the College of Engineering and the College of Math and Science in the recruitment and preparation of teachers. Faculty from these colleges collaborate in writing grants that support the recruitment and preparation of teachers in math and science. The Education faculty also collaborate with local school districts and businesses in recruitment and preparation activities related to mathematics. In addition the Michael D. Eisner College of Education offers generous scholarships, ranging from \$2,500 to \$5000, to math and science teacher candidates.	Beginning in 2011, the College joined CSU efforts to assist credentialed teachers who had lost their positions in preparing for an added authorization. In the same year the College also began participation in the Urban Teacher Fellowship, a career ladder program which brings in Community College transfers to CSUN and builds a pipeline into Education.
California State University, Sacramento	Mathematics	2011-12	10%	Yes	At the Sacramento campus, implementation of the CSU systemwide Math Teacher Initiative to increase the number of math teachers has resulted in a systematic approach to this issue that includes the following strategies: <ul style="list-style-type: none"> •Increased, more efficient and effective student advising that is better coordinated across education and the subject matter disciplines; held in various venues (advising centers, office hours, email, twice yearly evening "information sessions"); "Roadmap to the math/science credential" produced and widely disseminated •Substantial scholarship support through MSTI and NSF Noyce Program for future math teachers •Support for passing required standardized subject matter exams through 1) peer mentor tutors, 2) check-out of test guides, 3) funding for testing costs, 4) content-based courses offered just prior to test administration, with funding provided to cover course costs •Transcript evaluations for every student, providing detailed analysis of courses needed to complete various pathway 	In our experience over the past ten years in steadily increasing our numbers of math teachers, the following components are key: <ul style="list-style-type: none"> •Effective advising by knowledgeable faculty and staff, provided through multiple avenues •Scholarships and other funding widely available •Building an academic identity and peer support group around the math teaching profession •Content rich tutoring, workshops and other professional development

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California State University, San Bernardino	Mathematics	2011-12	24 students in credentia	Yes	Informational meetings for undergraduates and graduates from other universities in the area to enroll in the CSUSB math credential program. Encourage CSUSB to allow admission for Winter & Spring quarters. Fall 2011, 33 students were enrolled in either a math credential program or a foundational math credential program. Fall 2011, 23 students were enrolled in either a math credential program or a foundational math credential program.	Program numbers in mathematics are determined by the economic situation of the local 53 school districts served by CSUSB.
California State University, San Marcos	Mathematics	2010-11	Increase 5%	No	<ul style="list-style-type: none"> • The School of Education has a Math Science Technology Initiative (MSTI) grant for the CSU system. This program attracts undergraduate math and science majors to work as Teaching Assistants in lower division math and science courses. Those students are encouraged to apply for the Single Subject Program • A second grant from the CSU system, Teacher Recruitment shares similar aims as the MSTI grant, however these dollars are targeted to financially assist students in prerequisite courses that will help them meet the entry requirements for admission to the School of Education. • The third program is Math for America San Diego. This collaborative program selects 10 of the most qualified mathematics students and provides annual stipends, professional development opportunities and mentoring both in their credential year and four years into their employment. 	<p>1. MSTI: Collaboration with Math and Science faculty in the College of Science & Mathematics has been critical in recruiting and helping train Teacher Assistance. Mentoring has been provided by faculty in the College of Science & Mathematics as well. School of Education faculty provide pedagogical training to assist them with their teaching opportunities. The School of Education has learned there are difficulties in recruiting from this pool as these majors have multiple opportunities.</p> <p>2. Teacher Recruitment: Students are recruited into this program by School of Education faculty. These students are then grouped in cohorts as they complete prerequisite courses. This pathway is a very successful method of attracting math and science students into the credential programs.</p> <p>3. MfA SD: Application to this program is very competitive. Potential fellows for Math for America must complete an application that includes a difficult math problem, must have taken the highest level of mathematics in the course</p>

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California State University, Stanislaus	Mathematics	2011-12	Increase by 10%	No	<p>The Math and Science Teacher Initiative provides/supports/sponsors/offers the following strategies/services:</p> <ul style="list-style-type: none"> •Advising and mentoring by MSTI Faculty and Coordinating Staff •College of Education Teacher Recruitment & Retention Office serves as support unit for Math and Science Teacher Candidates •CSET & CBEST exam preparation support [i.e. advising, test guides, workbooks/instructional materials, workshops (CBEST and math CSET I & II)] •Coaching workshops for CSET Mathematics I & II exams •Foundational Level Credential recruitment and support to undergraduates, career changers/degree holders and Multiple and Single Subject teacher candidates and credential holders •[Paid] early-field experiences in teaching opportunities through the High School Mathematics Access Program (HiMAP), ARCHES and APIP initiatives •Transition from Student to Teacher and Central California Math Project annual Conferences •Recruitment activities/presentations/information sessions/events; follow-up with prospection 	<ul style="list-style-type: none"> •Continue to focus on the recruitment and support of math and science teacher candidates via the strategies listed above •Offer Math CSET III workshops beginning Fall of 2012
Chapman University	Mathematics	2010-11	3	Yes	Not Applicable.	The market in southern California has decreased due to the economy and we will be pursuing a marketing campaign over the next few years to recoup.
Claremont Graduate University	Mathematics	2010-11	0	Yes	N/A. All Mathematics Credential Candidates enter intending to go through the Internship Program (see Alternative Certification Report). Our recruitment goals for Mathematics candidates are related to the alternative program only.	

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Concordia University	Mathematics	2010-11	3	Yes	<p>Candidates are apprised of the need for qualified teachers of mathematics during the application process. There are at least four different times that candidates with majors or minors in mathematics are encouraged to pursue this credential.</p> <ol style="list-style-type: none"> 1. Admissions advisors present information on the Foundational Mathematics and Mathematics Credentials. 2. Information Sessions - The program hosts several Information Nights throughout the year. 3. Interview Process - the last step of the application is an interview with directors and faculty. Again, at this time applicants who are qualified are encouraged to pursue a mathematics credential. 4. Lastly, the university has a strong undergraduate program for students pursuing a career in teaching. Students with a mathematics major or minor are apprised of their options for a career in teaching and meet regularly with their content area faculty advisor and education faculty advisor. 	Even Math teachers are having a very difficult time finding teaching positions.
Dominican University of California	Mathematics	2010-11	1-5	Yes	Credential Candidates are encouraged to apply for APLE program to support their education.	

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Fresno Pacific University	Mathematics	2011-12	8	No	FPU will again partner with Fresno Unified School District to develop a cutting-edge student teaching program which is designed to prepare highly qualified prospective secondary teachers to be effective teachers in high poverty, hard-to-staff schools. In 2011-12 we will receive resources from the district to provide modest scholarships to our candidates. We focus on math candidates. We are marketing this program in ways that we hope will result in a modest increase in our enrollment of math candidates.	The majority of students who are interested in becoming math teachers are more interested in completing our traditional single subject credential program which includes student teaching. The “Highly Qualified Student Teaching” program option, in partnership with Fresno Unified School District, has become very attractive to future math teachers who might have otherwise been attracted to the Intern path. Steps to improve.... Fresno Pacific is partnering with the Science/Math Initiative (SMI) at UC Merced to meet the need for recruiting new candidates into teaching mathematics. We plan to open our single subject program at our regional center in Merced, California, in September, 2013. We expect that this partnership will result in increased applications for the student teaching and intern (alternative) programs. We have applied for a 2-year Robert Noyce Capacity Building Grant to support this innovative partnership, and expect to learn the results at the end of May.
Holy Names University	Mathematics	2010-11	5	No	Partnership with Teach Tomorrow in Oakland-recruitment of a diverse teaching force. Worked with national recruiting agency, Oakland Teaching Fellows Held webinar which faculty constructed describing our Credential Programs	Continue webinar and evaluate webinar with Oakland Teaching Fellow staff In beginning stages of building pathways from Undergraduate majors (Math) to Teacher Education Programs Teacher Education and Undergraduate faculty have met with K-12 high school (academies) which focus on Math in high schools Revise and improve current University website, Education pages.

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Humboldt State University	Mathematics	2010-11	Financial Incentives	Yes	Use of NOYCE Scholars Program and teacher recruitment funds to provide financial incentives/stipends to candidates in mathematics. Enhanced recruitment strategies with special focus on students in the California Community Colleges.	Development of website, recruitment materials and an increase in contacts with students in community colleges in California.
Loyola Marymount University	Mathematics	2011-12	4	Yes	Reaching out to undergraduate math majors through their departments; hosting info sessions to target potential high school math teachers seeking a credential; visiting numerous graduate school fairs; speaking to undergraduate teacher clubs; attending 2 California Forum for Diversity in Graduate Education forums.	Make contact with local undergraduate math department chairs to identify prospective teachers; show how alumni of our math programs are succeeding in their schools.
Mills College	Mathematics	2010-11	see below	Yes	Continue work in preparing students to acquire, understand, and construct subject matter knowledge. Means of Program Assessment (artifacts): Coursework that connects and supports goal; course exams, written assignments, and graduate research project, presentation, and oral defense. Satisfactorily complete coursework and maintain a 'B' average; written assignments contain a level of analysis (points are described, elaborated, and exemplified), there is evidence of inquiry and the ability to integrate theoretical and practical components of professional education. The content has (clear thesis, good organization and analysis of subject, references and reflection), and format (spelling, grammar, professional language and APA style). A graduate research project that contains a literature review of relevant studies that frames the theoretical perspectives that inform the study, and a methods, results, and discussion sections.	The completed graduate project is evaluated by the faculty who decides whether the student has met the requirements of a research project and is ready to graduate. There may be recommendations for added revisions. The college faculty discusses the curriculum, teaching strategies, and student learning at the monthly meetings, and at an annual retreat. In addition, there is an advisory board of noted educational leaders from the community, to advised ongoing program development. There are also periodic follow-up sessions and surveys with the graduates to gain their input on the program and possible directions for modification.
Mount St. Mary's College	Mathematics	2010-11	10%	Yes	Goal: Increase math candidates Continue outreach to math department to encourage undergraduate students who wish to teach K-12 to apply for the credential program.	Outreach has been effective. Encourage prospective teacher candidates from outside the college to consider math as a credential option. Continued outreach to inservice teachers in private schools to complete their credentials.
National Hispanic University	Mathematics	2009-10	5	Yes	Exceeded goal by 3 students for 2010-2011. Strategies included: - Paraprofessional encouragement - Encouraged multiple subject teachers to consider math - Recruit transfer students for teaching in math.	

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National University	Mathematics	2010-11	Increase enroll 7%.	No	University wide enrollment goals were established to increase enrollment in all programs by 7%. Transfer to Triumph Scholarships was promoted to help increase transfer of junior college students to National University to complete a 4 year degree of their choosing. Math degrees at the undergraduate level were one of the eligible programs for this scholarship.	Increase awareness of tuition discount at Jr. Colleges and military bases through Admission Advisor outreach and recruitment activities at the local National University centers.
Notre Dame de Namur University	Mathematics	2011-12	4	Yes	Increase marketing. Individualized attention with program directors.	Need pipeline for undergrads at NDNU to multiple and single
Occidental College	Mathematics	2010-11	1	Yes	Information meetings held on campus	New NSF grant scholarship for 09-10 year toward increasing Math and Science Candidates
Pacific Union College	Mathematics	2012-13	1 more math candidate	Yes	Education faculty made presentation at Math/Science workshop for high school seniors. High need teaching areas such as math emphasized. Sent Math Department information about Math Fellowship for Teaching.	Meeting with Math Department on campus would be one tool for interesting students in becoming math teachers.
Patten University	Mathematics	2010-11	6 Students	No	Information nights on campus by Associate Dean Increased mailing and flyers to districts and schools. Some additional students were realized with additional presentations.	New Marketing and Recruiting department personnel hired and new strategies implemented.
Pepperdine University	Mathematics	2011-12	8	No	Increased efforts to make current Seaver & GSEP students aware of our teacher education program.	Work one-on-one with prospective students to encourage dual credentials to include math and science plus their area.
Point Loma Nazarene University	Mathematics	2010-11	5	Yes	Designed, proposed to the university, and were approved to provide course to prepare candidates for passage of the test for Mathematics subject matter competence in the state of California	Offer course to candidates at four teaching sites. Include community members and LEAs in enrollment for this course
San Diego Christian College	Mathematics	2010-11	1	Yes	Identify candidates whose majors would prepare them to pass the CSET Mathematics. Advise them to take the CSET to work toward the Math authorization.	Upon acceptance to the college, an evaluation of transcripts will be completed before the first advising session.
San Diego State University	Mathematics	2012-13	Increase by 20%	No	MSTI Program: CSET prep classes, opportunities for tutors, fellowship programs, support for current students, financial assistance	Due to budget cuts, we have reduced the total number of credential candidates so we did not increase the total number of candidates receiving a credential in math and science.

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San Francisco State University	Mathematics	2010-11	20	Yes	Recruitment of potential teachers is conducted by the Center for Math and Science Education the College of Science and Engineering (COSE) from undergraduate population for this post-baccalaureate program.	More systematic coordination needed between the Graduate College of Education (GCOE) and College of Science and Engineering (COSE) is needed to make sure that all mathematics teachers recruited can indeed be prepared in the current budget climate in California. Funding for recruitment is most effective if funds for teacher preparation are also increased, which is not the case at SF State.
San Jose State University	Mathematics	2011-12	14	Yes	Primarily undergraduate and collaborations with local job transition programs, which help workers moving out of jobs in the local high tech industry into teaching.	Several additional strategies will be employed for AY 2011-2012. These strategies include, advising more middle level candidates in our Multiple Subjects credential program to complete the requirements for a single subject authorization in math. In order to address the NCLB requirements for middle school mathematics teachers, math education faculty have developed a 32 unit course of study, building on 18 units of existing coursework. We plan to offer tutoring in Summer 2011 for (a) students seeking to gain their middle school authorization, in order to encourage them to take more of our middle school mathematics courses, and (b) students seeking extra study opportunities to pass the CSET exams for the single subject credential in mathematics. In addition, we have assigned a representative from the College of Education (COE) to help develop a more extensive system of advising and preparing undergraduates to apply to the credential program. The COE representative will help in

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Santa Clara University	Mathematics	2010-11	As many as possible	Yes	The high attrition rate among our Noyce Scholars is not an anomaly; other institutions that were awarded Noyce teacher education grants for mathematics and science have experienced similar outcomes. At this point it is not clear why the program has not been more successful. We intend to work with the other Noyce Scholar institutions to understand the weaknesses in the program and to develop new strategies for finding candidates who have a better fit with the program.	The high attrition rate among our Noyce Scholars is not an anomaly; other institutions that were awarded Noyce teacher education grants for mathematics and science have experienced similar outcomes. At this point it is not clear why the program has not been more successful. We intend to work with the other Noyce Scholar institutions to understand the weaknesses in the program and to develop new strategies for finding candidates who have a better fit with the program.
Simpson University	Mathematics	2011-12	5%	Yes	Met with undergraduate math majors; support internships for math jobs.	Connect undergraduate math majors with the School of Education so they will matriculate into the graduate teacher education program in 2013.
Sonoma State University	Mathematics	2010-11	Meet teacher shortage	Yes	Elementary/Multiple Subject: Outreach continues at all field sites as credentialed teachers who are interested in mathematics are encouraged to gain a second credential in the field. Any candidate who has a substantial interest in mathematics is encouraged to switch to the single subject program for a credential in that area. Secondary/Single Subject: Allocate grants and other forms of support to recruit 30 teachers this year. Focus on multiple entry points for the preparation program including high school students, junior college students, current undergraduates, post graduates and re-entry students. Capitalize on existing recruitment efforts through the MESA programs, the university recruitment office, and with other linking organizations.	Elementary/Multiple Subjects: All candidates are advised of the new credentials available in general/foundational mathematics. Secondary/Single Subject: Prepare teachers efficiently and efficaciously depending on their backgrounds and needs; provide financial support for candidates; support and retain teachers in the community by establishing a mathematics professional learning community; and establish networks in the community to provide ongoing support for teachers and students. Establish new and stronger contacts with the participants at local agencies to promote recruitment; for example, send representatives to the local high schools to speak to students in math classes about becoming teachers. Invite students to campus to learn more about education programs.

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St. Mary's College of California	Mathematics	2010-11	5	No	As a Lasallian-based institution, the KSOE has a mandate to admit and to educate every qualified applicant who applies to our programs. Unlike some state institutions, we do not admission limits that require us to turn away qualified applicants. We admit every qualified mathematics applicant.	We intend to continue to admit all qualified applicants and engage in activities on an on-going basis to increase our enrollments. However, the budget crisis in California is severely impacting our ability to increase the number of applicants to our credential programs.
Stanford University	Mathematics	2009-10	16	No	Recruiting sessions at Stanford and events nationwide, informing applicants of the Knowles grant, loan forgiveness options for math teachers for Perkins and Stafford loans, promoting the Avery-Stanford loan and Woodrow Wilson fellowship	Will continue recruiting sessions at Stanford and events nationwide; informing applicants of loan forgiveness options for math teachers (ie. Perkins and Stafford loans); increase contact with Math depts at local universities; increase promotion of the Avery-Stanford loan and Woodrow Wilson fellowship.
The Master's College	Mathematics	2011-12	3	Yes	The Department Chair takes an opportunity to visit the classes of a particular subject area such as Math and recruits students. In addition a memo is sent out to the various department chairs (Math, English, History...) and these students are invited twice a year to an informational meeting held on campus.	The 2010-11 academic year will be the first year for setting goals for increasing prospective teachers trained in this teacher shortage area. The steps we plan to use to achieve the goal of acquiring at least one candidate for this area include: 1) Presenting the program in individual classes within this major. 2) Providing students within this major with information on financial aid that is available for candidates that pursue a credential in this area.

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Touro University	Mathematics	2010-11	Curriculum & Literacy	Yes	Single subject mathematics candidates undertake an intensive study of the state adopted 7-12 Mathematics Content Standards and the Mathematics Framework for California Public Schools(2006) in the curriculum and instruction courses, EDU 775: Secondary Methods 1 and EDU 777: Secondary Methods 2, through a series of observations in EDU 780: Orientation to Student Teaching & Seminar, and through supervised teaching in EDU 781: Student Teaching & Seminar. Candidates identify the connections across major concepts and principles within mathematics and across disciplines throughout the curriculum and instruction classes. Candidates learn the expected progression of conceptual understanding, computational skills, procedural skills, and problem-solving skills throughout the 7-12 grade levels. Thoroughly grounded in understanding the Standards and what constitutes a balanced mathematics program, single subject math candidates follow the Touro University Lesson Plan to design mathematics instruction	All math candidates need specific instruction in math strategies and literacy in the content area of math.
University of California, Berkeley	Mathematics	2011-12	9	Yes	Recruitment, website information	Given continuing budget constraints, we aimed for a slight increase - a combined (Math & Science) enrollment of 20, which was exceeded by 1. We enrolled 9 students in Math and 12 in Science, for a total of 21. It is difficult to achieve an even number of students split between Math and Science.

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University of California, Davis	Mathematics	2010-11	15	No	Although the goal was not achieved, the program made some strides in increasing the number enrolled for 2010-11, reaching the 80% mark in meeting the enrollment goal. The strategies used were: 1. Increased and targeted recruitment 2. Increased faculty contact with applicants/potential applicants 3. Development of a math and science undergraduate teacher pipeline program. 4. Successful application for an NSF Noyce Grant to fund scholarships for mathematics applicants	Lessons learned: The number of applicants to the math credential program has increased because of the above steps. Our program is very attractive to these applicants but a portion do not enroll because competing credential programs have higher scholarship endowments. Federal and state financial aid programs such as the "TEACH" grant program includes too many ways that a credential candidate may not meet the Program's employment conditions requirements, particularly in this CA budget climate for schools. If a newly credential teacher is unable to find employment in a qualifying school/district, the "TEACH" grant reverts to an unsubsidized loan. Credential candidates are not willing to take that risk.
University of California, Irvine	Mathematics	2010-11	Increase Undergrad prep.	Yes	a) Continue to offer multiple introductory courses related to math teaching and learning; b) continue to increase opportunities for early field experience in K-12 classrooms; and c) continue targeted recruiting efforts at freshmen and sophomores.	Continued successful recruitment of math majors and the development and staffing of new courses has necessitated a strong partnership between deans and faculty representing mathematics and education departments. The availability of special funding from the UC President's Office and from grants has been a significant factor in achieving our goal.

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University of California, Los Angeles	Mathematics	2010-11	30	Yes	<p>1.Implemented California Teach: One Thousand Teachers, One Million Minds. Part of the UC Math Science Initiative, the goal of California Teach is to recruit UC students majoring or planning to major in Math, Science and Engineering to consider teaching as a career.</p> <p>2.Offered a Joint Mathematics Education Program (JMEP) for mathematics majors who are considering secondary teaching. JMEP offers seniors a way to begin taking teacher education courses in their senior year. The following year, they are employed as full-time mathematics teachers with full salary in TEP partnership schools and work towards a master's degree in education.</p> <p>3. Emphasis on benefits of Federal Grant program pathway called IMPACT for math applicants.</p>	<p>1.Dedicated recruitment coordinator for CalTeach and JMEP.</p> <p>2.Ongoing partnership between the teacher education program and the UCLA Mathematics Department</p>
University of California, Riverside	Mathematics	2010-11	Recruitment	Yes	<p>The Graduate School of Education works closely with the Science Mathematics Initiative (SMI) Program to make mathematics majors aware of the need for highly qualified middle school and high school mathematics teachers. STEM majors can participate in 60 hours of observation/field experience to explore teaching prior to admission. Presentations and workshops are scheduled throughout the year to provide information on a career in teaching. The Graduate School of Education also hosts Open House events where faculty, advisors, and current students are available to discuss the programs and pathways available to those wanting to pursue a career in teaching. Financial Aid workshops are also offered by the SMI Program so students can plan on the funding opportunities available to support candidates who pursue high need certification areas such as mathematics.</p> <p>The Graduate School of Education will offer an education minor that begins in Fall 2012. The minor will allow undergraduates to participate.</p>	A recruitment planning committee composed of faculty and Teacher Education advisors is critical to develop a campaign that targets our undergraduate population through courses, workshops and Open House events. Local schools are key partners in providing support to our program and math candidates. Mentor teachers and school administrators are invited to events to foster professional development of teachers involved in mathematics curriculum.
University of California, San Diego	Mathematics	2010-11	12 program completers	No	Cal Teach collaboration with Math department on recruitment for Math Education minor as well as coursework & field placements; financial support for credential/M.Ed program	Early outreach through freshman seminars and faculty mentorships was valuable as well as articulation with math department.

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University of California, Santa Barbara	Mathematics	2010-11	Recruitment & Preparation	Yes	<p>Recruit, support, and prepare exceptional secondary mathematics teachers. We have attempted to increase the student diversity in our courses, including underrepresented students and first generation students.</p> <p>1) We recruited from our own Cal Teach courses, such as ED 3A, ED 130, ED 134/Math 181 A, and ED 135/Math 181 B.</p> <p>2) We met with individual students, in person and/or on-line. Students also shared information about our program with their peers.</p> <p>3) Spoke at a STEM junior college transfer meeting sponsored by the UCSB Mathematics Department and teaching more Cal Teach courses are two examples.</p> <p>4) Used our NSF NOYCE grant to provide \$10,000 fellowships to 15 math/science credential candidates.</p>	Strategies above were successful and will continue for recruiting in 2010 - 2011 and 2011 - 2012. We re-applied for another Noyce grant for ensuing years of candidate support.
University of California, Santa Cruz	Mathematics	2013-14	15	No	<p>Promote outreach for Cal Teach program.</p> <p>-STEM Education Minor in place to help support students who are planning to become secondary math or science teachers. Recruit at CSU/UC Diversity Forums.</p> <p>-MA/Credential Advisor and Program Director speak to undergraduate classes in math education.</p> <p>-Math Subject Matter Program in place.</p> <p>-Noyce and Bruce Foundation grants to support math students in the MA/Credential program.</p>	<p>-Increase number of selected candidates from applicant pool.</p> <p>-Continue to promote CAL Teach program.</p> <p>- MA/Credential Advisor and Program Director recruit students from classes in math & education.</p> <p>Also target lower division math courses.</p> <p>-Actively promote Noyce and Bruce Foundation grants for math students.</p> <p>-Math Subject Matter Program in place to help students meet subject matter requirements.</p> <p>-Further promote STEM Education Minor</p> <p>Grant funding provided is an incentive to attend the program. However, if students receive greater degree of funding from another institution or can reduce costs by attending a program close to home they will select those options rather than attend our credential program.</p>

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University of LaVerne	Mathematics	2010-11	Mathematics waiver	No	Mathematics is expected to seek approval from the CA credential commission as a subject matter waiver program. Approved STEM program. Addition of Noyce Scholars program for STEM undergraduate students.	Actively pursue mathematics waiver program and STEM students and increase number of STEM scholarships. Actively recruit Noyce Scholars.
University of Phoenix	Mathematics	2010-11	37	Yes	<ul style="list-style-type: none"> • Student-centric cultivation • Improved marketing communications • Showing support with helping profession by reducing costs • Developing technology-based solutions to facilitate learning" 	<ul style="list-style-type: none"> • Reorganization of Workforce Solutions team into dedicated K-12 business unit • Development of marketing-specific brochures for Secondary program • Direct Mail and Email marketing activities for prospective students • Tuition discounts and application fee waivers for prospective students • Phoenix.edu improvements to messaging and initial student support needs • Significant improvements in online classroom to encourage participation and increase satisfaction/retention"
University of San Diego	Mathematics	2010-11	Maintain Enrollment	No	The M.Ed. in Mathematics, Science and Technology did not recruit students in 2010-2011. There are still candidates completing the program but no new applicants were accepted.	The department is starting an Academic Program Review which will include an examination of this program to determine its future.
University of San Francisco	Mathematics	2010-11	Recruit	Yes	During information meetings with prospective students we inform them that there is a teacher shortage in the area of mathematics. We encourage Multiple Subject candidates to add a Single Subject credential in this area. We encourage Single Subject candidates to add a second Single Subject credential in mathematics.	Continue focused advertising and recruitment; provide assistance for candidates in terms of subject matter competence resources and financial support.
University of Southern California	Mathematics	2011-12	50	No	<p>Math for America - Noyce Foundation funded fellowship program supporting students preparing to teach mathematics.</p> <p>Additional scholarship funding used to support students preparing to teach Mathematics</p>	By offering the MAT program online, the Rossier School has been able to expand its geographical reach, which has increased the program's ability to recruit and enroll prospective mathematics teachers. In addition, external fellowship support has enabled Rossier to increase mathematics enrollment in the campus-based program.

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University of the Pacific	Mathematics	2010-11	1	Yes	We informed Diversified Majors in the Multiple Subject program who have concentrations in mathematics to take the CSET-Mathematics, subtests 1 and 2 and a single subject methods course so that they can qualify for two credentials (Multiple Subject and Foundational Mathematics, Single Subject). The Mathematics Department has a BA or BS pathway for a teaching credential in Foundational Mathematics or Mathematics (all courses). We admitted four students in the Teacher Apprentice Program who are Diversified-Liberal Studies majors and mathematics minors.	We continue to recruit Diversified Major students with concentrations in mathematics to take the CSET-Mathematics, tests 1 and 2. We work with a consortium to recruit high school juniors for careers in math teaching. Students attend the local community college and then apply to transfer to the University of the Pacific to major in mathematics or in liberal studies with a mathematics minor. Four students transferred to our University in Fall 2010 who are in this recruitment program. We increased the number of majors in Diversified-Liberal Studies in the fall 2010 freshman class and increased the number of transfer students. We will tell students about the Mathematics concentration in the major.
Vanguard University	Mathematics	2010-11	Increase by 1 student	No	Meet with the Math undergraduate senior students and advisors at Vanguard to better inform and explain our teacher preparation program.	Although our goal of increasing by 1 student was not met for the 2010-2011 year, our math student teachers have steadily increased over the years: 2006-2007 = 2; 2007-2008 = 2; 2008-2009 = 4; 2009-2010 = 6; We are expecting to meet our goal of increasing by 1 student in the 2011-2012 reporting year.
Western Governors University - CA	Mathematics	2010-11	Increase graduates 25%	Yes	Graduates inscreased 33%. We are trying to increase enrollments, decrease attrition, and decrease the time to graduation.	We have increased our marketing efforts. We are trying to improve the quality of studnets that enter the program. We are offering increased curricular support and have made a number of curricular changes in areas where students typically struggle.

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Westmont College	Mathematics	2010-11	award 1 cred. in math	No	<p>We continue to give each academic department, including the Mathematics Department on the Westmont campus, a list of 10 steps their professors can take to encourage students to pursue a teaching credential in their particular subject.</p> <p>We have worked to get updated information on departmental web-pages clearly indicating steps toward completing a credential at Westmont.</p> <p>In addition to many one-on-one meetings, we meet annually (and formally) with all Westmont students interested in pursuing a single subject credential. Some of these students who earn a baccalaureate degree in Mathematics or other fields at Westmont go on to earn credentials in Mathematics and other fields at other colleges and universities in California.</p> <p>These strategies appear to be working, in that for 2012-13, we will be awarding at least 2 (possibly 3) credentials in Mathematics; and even though we did not meet our goal for 2010-11, we will be meeting the goal for 2011-12 (to be REPORTED on a year from now!)</p>	<p>Given the shortage of math teachers in California, we have recently been encouraging Liberal Studies majors with strong aptitude in mathematics to consider getting an added authorization in mathematics, or simply to switch from a Multiple Subject credential to a Single Subject credential in Mathematics. For 2009-10, our one credential awarded in mathematics was a student who had majored in Liberal Studies (which is intended chiefly for students preparing for an elementary [Multiple Subject] credential), but had minored in mathematics. This student passed both the Foundational Level Mathematics CSET and the Advanced Mathematics CSET, successfully completed student teaching in mathematics, and is now employed in teaching mathematics at the high school level here in Santa Barbara. We will be reporting on a very similarly successful situation for 2011-12.</p>
Whittier College	Mathematics	2011-12	Identify Math majors	Yes	<p>Work with mathematics department faculty in the college's undergraduate program to identify majors who might be interested in exploring teaching as a career.</p> <p>Descriptions of strategies used to achieve goal:</p> <ol style="list-style-type: none"> 1. Collected data from past 8 years on mathematics majors who completed single subject teaching credentials at Whittier College. 2. Discussed avenues for meeting with mathematics majors earlier in their programs to introduce them to the job market in teaching for mathematics at the secondary level. 	<p>Volunteered to offer programs for members of the Math Club each year to discuss California requirements for earning single subject teaching credentials.</p> <p>Planned schedule for meeting with mathematics faculty on a yearly basis to update advisors on credentialing requirements and opportunities for exploring careers in teaching as undergraduates.</p> <p>Targeted sophomore and junior mathematics majors for dissemination of brochures on teaching careers.</p> <p>Hired a full time faculty professor in 2011 who's expertise is math and science.</p>